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ABSTRACT

Information on language use patterns in bilingual classrooms is presented and analyzed in relation to the types of grouping decisions commonly made by teachers. The data were collected from two bilingual elementary classrooms and obtained through audio-recording and observation. Group setting contrasts of group size and instructional mode were established. The variables selected to measure language use were amount of talk, complexity of speech, and language functions, for which a speech act category system was adapted. It was concluded that group setting affects language use. Findings include: (1) the effect of group setting on language use is mediated by teaching style: (2) small group settings provide a highly favorable context for language use, (3) the range of speech acts was broader during individual work than during teacher-directed instruction, (4) the weaker language of all students was infrequently used in the classroom for natural communication, and (5) the weaker language fulfilled a variety of different functions. Tables present types and examples of speech act categories and quantitative analyses of amount of talk in the dominant and weaker language, the different speech acts performed in the dominant language, and the distribution of language functions in the weaker language. (JK)

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Variation in Language Use Patterns in Two Bilingual Second-Grade Classrooms

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Abstract

Many issues related to the improvement of instruction in bilingual classrooms could be more adequately addressed if more were known about language use in this context. The study reported here, based on an extensive corpus of data collected over a ten-week period, examines differences in pupil language use across various group settings of the classroom. It was found that students infrequently used their weaker language in the classroom for natural communication. A functional analysis of pupil talk, however, revealed that the weaker language was used for a wide variety of communicative functions. It was also found that group setting had an effect on language use patterns, suggesting that decisions made by teachers with regard to grouping strategies can have a direct effect on student language use.

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Purpose

The primary purpose of this study was to obtain naturalistic, descriptive information on language use patterns in bilingual classrooms, and to analyze this information in relation to the types of grouping decisions that are commonly made by teachers. Despite the centrality of language-related issues in establishing a rationale for bilingual education, as well as in implementing bilingual programs, very little is known about the nature of language interaction in bilingual classrooms. The bulk of research conducted in the area of bilingual education over the past decade has followed an evaluation approach, focusing primarily on instructional outcomes of bilingual programs, and only secondarily on the teaching/learning process itself. Although this product-oriented approach to research has been necessary due to the highly politicized context within which bilingual bicultural programs operate in this country, it is only through process-oriented research that classroom teachers can learn more about what is taking place in their classrooms, and about what types of practices may be more effective in achieving specific aims.

The study on which I am reporting provides an in-depth look at pupil language use in two bilingual classrooms. It is based on an extensive corpus of data, collected over ten weeks of full-time observation and data collection in the two classrooms.

In order to better address issues that are relevant to practitioners, the research questions in this study have been formulated within a framework that suggests alternative courses of action for practitioners -- viz., the effect of teacher grouping strategies on student language use patterns. Decisions regarding optimal grouping arrangements are among the most fundamental that teachers must make on a continuous basis. These decisions take on even greater importance in bilingual education classrooms, where teachers must deal with different groups based on language dominance criteria for reading, language arts, second language instruction, and subject area instruction. Moreover, in programs where dual language development is an important goal, there is concern that classrooms be structured in a way that students are encouraged to interact in their weaker language, thus maximizing the potential for second language acquisition to take place.

At a global level, the basic research questions being explored in this study were the following:

1. Do the language use patterns of students in bilingual classrooms vary depending on the group settings in which the interaction takes place?
2. If differences are evident, what implications do they have for language development in each of the two languages of the classroom?

Description of Sample

The investigation was carried out in a large, rapidly growing city in northern California where over 35 percent of the students are of Hispanic descent. Within this city, bilingual education programs are found primarily in schools that have a substantial minority population. As a rule, they tend to appear in schools that serve predominantly low SES communities, and the vast majority of students enrolled in Spanish/English bilingual programs in this area are of Mexican ancestry.

Based on these factors (ethnic background of students and SES status of the surrounding community) a "typical" elementary school district containing bilingual education programs was identified.

Within this district, two second-grade classrooms were selected based on two criteria: first, that they be located in a school which contained a fully functioning bilingual program for at least grades K-4, and second, that the participating teachers be experienced bilingual teachers, judged as "highly effective" by both their principals and by the district's bilingual resource teachers.

Within each classroom, a random stratified sample of 12 students was selected for participation, with an equal number of students from each of the three language dominance groups (English dominant, Spanish dominant, and balanced bilingual) being represented in the sample. (The basis for classifying students was the Language Assessment Battery, administered by the district at the start of the school year.)

Method

The method being followed for collecting data involved naturalistic audio-recording of children as they pursued their normal classroom activity. The investigator was present during all of the recording, and obtained copious contextualization notes to accompany the transcripts. Each participant was recorded for one full school day. The recording procedure involved having the students wear a vest with a small wireless microphone contained in an inner pocket. The students knew they were being recorded. Approximately 80 hours of recordings were obtained following this procedure.

Group setting contrast were made along two dimensions: (a) group size (i.e. large group vs. small group), and (b) instructional mode (teacher-directed vs. individual work).

The data analysis procedure involved imposing two 3x2x2 post hoc designs (language dominance by sex by group setting) on each criterion variable.

Criterion Variables

Three criterion variables were selected to measure language use. The first involved "amount of talk" in the two languages of the classroom, and was obtained using stopwatches. The second variable was "complexity of speech", and was determined by performing a T-unit analysis of student utterances. The third aspect of language use examined was "language functions", focusing on the uses to which the two languages of the classroom

were put. A speech act category system developed by Wood, et al (1977) was adapted to code student utterances as to their function. This system contained seven superordinate categories (control, feeling, informing, ritualizing, imagining, language to self, rehearsal speech), and a total of 78 speech acts (see Table 1). An inter-rater reliability of .90 was established for the system as a whole using Light's extension of Kappa (Frick and Semmel, 1978).

Problems

Two problems that were encountered in conducting this research are worthy of note:

1. The first problem is related to the difficulty involved in attempting to sample language behavior. Initial attempts to set a reasonable time period in which to sample student language use in each group setting were unsuccessful due to the instability of the variable. Since no reliable recording period could be established, the initial plan of recording each student for set periods of time in each group setting had to be abandoned in favor of an alternative strategy which involved simply obtaining the maximum amount of recording possible (set at one full day per child). Although this alternative strategy necessitated a change in design, it did have the important advantage of providing a richer and more extensive data base than originally envisioned.

2. A second problem arose during efforts to establish reliability for each of the 78 subordinate categories in the speech act coding system. The major difficulty was created by the low frequency of some of the speech acts. Consequently, it was decided to calculate inter-rater reliability (using Light's extension of Kappa) for only the seven superordinate categories. For the 78 individual speech acts, a simple percentage of agreement was calculated.

Findings and Conclusions

1. The findings obtained in this study confirmed the hypothesis that group setting affects language use. Numerous differences were reported related to language use in contrasting group settings. The effect of group setting on language use, however, seemed to be mediated by teaching style. In the classroom where students were trained to work together in small groups (classroom P), academic talk was most prevalent in small groups; whereas, in the classroom where the teacher favored "direct teaching" as the primary means for transmitting knowledge (classroom Q), the highest proportion of academic talk occurred in the teacher-directed instructional mode.

2. Despite these mediating factors, a consistent finding throughout was that the small group settings seemed to provide a highly favorable context for language use. In both classrooms there was more talk in the small group setting (Table 2) as well as a higher frequency of speech acts. Moreover, in the classroom which favored small group instruction over large group instruction, the mean T-unit length of student utterances was significantly greater.
3. The range of speech acts ("range" is determined by the number of different speech acts uttered) was broader during individual work than during teacher-directed instruction (Table 3). The implication here is that excessive teacher control of student talk may have negative effects on oral language development.
4. One of the most striking findings of this study was that the weaker language of all students, including "balanced bilinguals", was infrequently used in the classroom for natural communication (Table 4). This finding is of considerable interest, given that the bilingual programs in these two schools placed an emphasis on bilingualism as a goal. There are two factors that seemed to work against extensive use of the weaker language in these classrooms:

a. Grouping strategies used by the teachers prevented significant interaction across language dominance groups in these classrooms. Students were seated according to their reading group. These seating patterns, which effectively separated English dominant and Spanish dominant students, were maintained throughout most of the day.

b. There appeared an implicit assumption on the part of the teachers that second language acquisition takes place naturally in bilingual classrooms without any need for conscious planning.

5. The students in these classrooms used their weaker language for a variety of different functions. Despite the low quantity of talk in the weaker language, an examination of the range and content of that talk reveals a broad distribution of functions over many different categories - over two thirds of talk in the weaker language involved the major communicative functions, whereas less than one-fourth were of the pseudo-communicative type (e.g., rehearsal speech) commonly prevalent during formal second language instruction (Table 5).

Implications

Two major implications for educational practice can be drawn from these findings:

First, to achieve more extensive use of the weaker language in bilingual classrooms, teachers need to develop grouping strategies that provide both opportunity and need for the weaker language of students to be used for social-interactive purposes. Informal development of the weaker language during subject matter instruction should be pursued, as well as science and math problem-solving activities using small groups composed of students from different language dominance backgrounds.

Secondly, a significant implication that can be drawn from this study is that the bilingual classroom context demonstrates a tremendous potential for effective second language development. The wide range of functions for which all students used their weaker language demonstrates that this kind of environment, if properly exploited, can provide an ideal context for natural acquisition of a second language.

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Table 1

Speech Act Category System[a]

A. Control Function

1.	wanting:	"I want some more milk."
2.	offer:	"I'll help you fix it." "I know what that means."
3.	command:	"Get my bike now!"
4.	suggestion:	"Let's read books."
5.	formulation:	"You're 'sposed to pick up your toys before you go."
6.	permit:	"You can play with my boat."
7.	intend:	"I'm going to the store."
8.	query want:	"You wanna play cards?"
9.	query permission:	"May I use your scissors?"
10.	query intention:	"Are you playing or not?"
11.	promise:	"I'll always defend you."
12.	threat:	"I'm gonna tell your mom."
13.	warning:	"You're gonna fall."
14.	prohibition:	"Don't touch my doll."
15.	condition:	"If you help me (I'll play ball too)."
16.	contractual:	"I'll give you some candy if you let me have that car."
17.	command-verbalization:	"Tell her about it," or "Stop talking right now."
18.	assent:	"Sure, Ok."
19.	refuse:	"No, I won't."
20.	reject:	"I don't want to go."
21.	evasion:	"We'll see." or "I don't know."
22.	query justification:	"Why did you do it?"
23.	justification:	"Because my mom told me to." or "It's naughty to do." or "Children aren't allowed to do that."
*24.	accuse/tattle:	"Mis Flores, él me está copiando."
*25.	mark possession:	"This is mine."

B. Feeling Function

1.	exclamation:	"Wow!" or "Nuts!"
2.	expression of state/attitude:	"I feel just terrible today." or "I really don't like that program."
3.	query state/attitude:	"How do you feel now?" or "What do you think about'Popeye'?"
4.	taunt:	"You're a real baby."
5.	challenge:	"I bet I can stay up later than you."
6.	approval:	"You had a nice idea."
7.	disapproval:	"You did a silly thing."
8.	cajole:	"You know how--come on."
9.	congratulate:	"Good for you!"
10.	commiseration:	"I'm sorry you were hurt."
11.	endearment:	"I'm your best friend."
12.	tale-telling:	"And then she went to the store and there she saw my tío . . ."

Table 1 continued.

13.	blaming:	"John broke the glass, not me."
14.	query blame:	"Who wrote on the wall?"
15.	command to apologize:	"Say you're sorry."
16.	apology:	"I'm sorry I broke your picture."
17.	agree:	"I hate him too."
18.	disagree:	"I think you're wrong--he's nice."
19.	reject:	(same as control)
20.	evasion:	(same as control)
21.	condition:	"I'd like her if she was nice to me."
22.	query/justification:	(same as control)
23.	justification:	(same as control)
*24.	joking/"kidding"	(laughing) "Carlos trae calzones puesto."
*25.	self-congratulation:	"Look, I finished . . ."

C. Informing Function

1.	ostension:	"That's (pointing) the car I like."
2.	statement:	"I never hit other people."
3.	question--positive/ negative:	"Is that your car?"
4.	content question:	"Who runs fastest in your neighborhood?"
5.	why question:	"Why does he always win?"
6.	query name:	"What's that thing called?"
7.	response:	"Bill runs the fastest."
8.	affirm:	"You're right."
9.	deny:	"No, you're mistaken."
10.	reject:	"No, it's not terrible."
11.	evasion:	(same as control)
12.	condition:	(same as control)
13.	justification:	(same as control, but wider in scope-includes all supporting material)
*14.	explain (e.g., what happened, or how to do something, or what something means:	(to substitute teacher) "First we spell it, then we write it."
*15.	reporting (i.e., what someone else said)	"She said that you're not funny, you're smart."

D. Ritualizing Function

1.	greetings:	"Hi."
2.	farewells:	"See ya' later."
3.	turn-taking:	"And what do you think?" or all nonverbal cues signalling the back and forth flow in conversation.
4.	call:	"Nancy. . ." "Mira, mira" (attention-getting)
5.	availability response:	"Yeah" "You called me?"
6.	request to repeat:	"Say that again."
7.	repeat:	"I said, 'Give it to me.'" (other rituals include: introducing someone, welcoming a person, acknowledging another's new status, and so on.)

Table 1 continued.

*8. formulas: "Thankyouvedymuch."

E. Imagining Function

1. commentary, fantasizing pretending: (student passes pencil through vest frill) "Mira, estoy cosiendo."

*J. Language to Self

1. reflective: (to self) "That's an easy way to count to ten."
2. non-reflective: (includes language play)

*K. Rehearsal Speech

1. exemplifying (e.g., using a word in a sentence): Teacher: "Can you use it in a sentence?" Student: "My dog went to you."
2. practice speech (a response which is evaluated on basis of correct usage: (In ESL class) Teacher: "Are you wearing a skirt?" Student: "Yes, I am wearing a skirt."

* These categories were added by the investigator.

[a]Adapted from Wood et al. (1977), which in turn was based on Wells (1973).

TABLE 2

Mean Amount of Talk in Dominant Language[a] by

Language Dominance and Group Size: Large Group (LG) vs. Small Group (SG)

	Classroom P					Classroom Q				
	LG		SG		Pooled	LG		SG		Pooled
Lang Dom	Mean	S.D.	Mean	S.D.	St. Dev.	Mean	S.D.	Mean	S.D.	St. Dev.
SD	20.0	11.0	41.6	15.4	16.2	11.7	5.5	13.7	7.8	6.7
BB	20.2	9.6	30.0	7.7	8.7	11.4	2.9	22.2	10.7	6.8
ED	18.3	14.5	32.6	23.9	16.3	15.1	8.9	21.1	11.0	9.9
Overall	19.5	10.8	34.8	15.4		12.5	5.5	18.8	9.8	

a Number of seconds talk/10 minutes BB = Balanced bilingual

SD = Spanish dominant ED = English dominant

TABLE 3

Mean Number of Different Speech Acts Performed in the Dominant Language: Teacher-directed (A) vs. Individual Work (B)

	CLASSROOM P					CLASSROOM Q				
	A	S.D.	B	S.D.	Pooled St. Dev.	A	S.D.	B	S.D.	Pooled St. Dev.
Span Dom	17.3	5.1	33.3	2.3	8.9	16.8	7.6	16.8	3.1	4.5
Bal Bil	22.5	6.3	35.5	5.3	8.7	15.0	7.0	21.8	8.3	8.4
Eng Dom	25.0	5.7	33.8	7.6	8.0	20.3	0.9	35.0	9.6	10.0

S.D. = Standard Deviation

TABLE 4

Mean Amount of Talk in Weaker Language[a] by Language Dominance and Classroom

	Classroom P		Classroom Q		Pooled
	Mean	S.D.	Mean	S.D.	St. Dev.
Span Dom	0.8	0.3	0.3	0.4	1.2
Bal Bil	2.3	2.3	1.2	1.2	1.8
Eng Dom	0.1	0.1	0.1	0.1	0.1
Overall	1.1	1.8	0.5	1.1	

a = Number of seconds talk/10 minutes S.D. = Standard Deviation

TABLE 5

Distribution of Language Functions:
Weaker Language of Pupil

(% of Total)

	Classroom P		Classroom Q	
	Wkr	S.D.	Wkr	S.D.
Control	13.6	12.1	20.0	22.4
Feeling	3.8	5.9	8.7	15.6
Inform	30.1	29.2	39.5	7.6
Ritual	17.3	30.3	13.0	17.3
Imagine	0.0	0.0	0.0	0.0
Lang. to Self	6.4	10.2	3.5	5.2
Rehearsal Speech	27.5	36.3	15.5	31.0

S.D. = Standard Deviation